

C L A I M S

1. A disc drive unit comprising:
a case body having at least a bottom face;
a disc tray capable of holding a disc and moving
5 between a disc driving position where the disc tray is
housed in the case body and a disc loading position
where the disc tray projects from the case body;
functional members provided on the disc tray; and
a lower cover attached to the disc tray so as to
10 be situated between the functional members and the
bottom face of the case body, in order to protect the
functional members; wherein
the case body has a notch or opening formed in a
position of the bottom face thereof which faces the
15 functional members when the disc tray is situated in
the disc driving position.
2. The disc drive unit according to claim 1,
wherein the lower cover has a notch or opening in that
part thereof which faces the functional members.
- 20 3. The disc drive unit according to claim 1,
which comprises a pickup unit having an optical head
for recording or reproducing information to or from the
disc, and wherein one of the functional members is a
thread motor for sliding the pickup unit in the radial
25 direction of the disc.
4. The disc drive unit according to claim 1,
wherein the thread motor is situated in a position
corresponding to the front edge portion of the lower
case.
- 30 5. The disc drive unit according to claim 3 or 4,
wherein an output shaft of the thread motor is situated
in front of the case body and coupled to a screw shaft
for sliding the pickup unit by a transmission-

connection mechanism composed of gears, and openings or notches are formed in those positions of the lower cover and the case body which face the transmission-connection mechanism.

5 6. The disc drive unit according to claim 3, wherein the thread motor is a pulse motor coupled directly to a screw shaft for sliding the pickup unit:

7. The disc drive unit according to claim 1, which comprises a main circuit board attached to the
10 case body, a sub-circuit board attached to the disc tray, and a flexible connecting body for electrically connecting the main circuit board and the sub-circuit board, and wherein the functional member is the flexible connecting body when the disc tray is situated
15 in the disc driving position and a bent portion thereof faces the notch or opening in the bottom face of the case body.

8. The disc drive unit according to claim 7, wherein the flexible connecting body is a flexible
20 printed circuit (FPC) or a flexible flat cable (FFC).

9. A disc drive unit comprising:
a case body having at least a bottom face;
a disc tray capable of holding a disc and moving between a disc driving position where the disc tray is
25 housed in the case body and a disc loading position where the disc tray projects from the case body;
functional members provided on the disc tray;
a lower cover attached to the disc tray so as to be situated between the functional members and the
30 bottom face of the case body, in order to protect the functional members; and
a vibration-proof cushion for absorbing vibration generated as the disc is driven; wherein

the case body has a notch or opening for the evacuation of the functional members which move up and down as the disc oscillates, in that position of the bottom of the case body which faces the functional members.

10. The disc drive unit according to claim 1 or 9, wherein the functional member is a spindle motor for driving the disc.

11. The disc drive unit according to claim 1 or 9, wherein a protective tape is attached to the notch or opening in the bottom face of the case body.

12. A disc drive unit comprising:

a case body including a lower case body having a case bottom face and an upper case body having a case top face;

a disc tray capable of holding a disc and moving between a disc driving position where the disc tray is housed in the case body and a disc loading position where the disc tray projects from the case body;

functional members provided on the disc tray;

a pickup unit having an optical head for recording or reproducing information to or from the disc;

a screw shaft which engages the pickup unit and moves the pickup unit; and

a lower cover attached to the disc tray so as to be situated between the functional members and the case bottom face, in order to protect the functional members; wherein

the pickup unit, the screw shaft, and the lower cover constitute a chassis unit, and the chassis unit is provided with a vibration-proof cushion for absorbing vibration generated as the disc is driven,

and

the case body has a notch or opening formed in
that position of the case bottom face which faces the
functional members when the disc tray is situated in
5 the disc driving position.